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Acute Coronary Syndromes

GENDER DIFFERENCES IN VASCULAR COMPLICATIONS ASSOCIATED WITH TRANSFEMORAL AND TRANSRADIAL CARDIAC CATHETERIZATION AND PCI: A SINGLE-CENTER EXPERIENCE

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: Gender, Dissection, Outcomes from ACS
Abstract Category: 1. Acute Coronary Syndromes: Clinical
Presentation Number: 1170-193

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Background: Recent data indicate that overall clinical outcomes are similar after cardiac catheterization (CATH) and percutaneous coronary intervention (PCI) from the transfemoral (TF) and transradial (TR) approaches, but that vascular and bleeding complications (VC+BC) are lower from TR versus TF. Whether these same results are observed in both men and women is uncertain.

Methods: 6,043 consecutive CATH and PCI procedures (3,053 TF; 2,990 TR) were performed at Wake Forest Baptist Medical Center from January 2009 to December 2011, in 2,202 women and 3,841 men. Procedural metrics (crossover rates, fluoroscopy and procedure times, contrast volume) and VC+BC incidence were assessed.

Results: Access site crossover in TR procedures was higher in women than men (9.2% versus 6.1%, p<0.001), primarily due to inability to insert the radial sheath in 6.3% of women versus 3.1% of men (p<0.001). Fluoroscopy and procedure times were clinically similar by access site and gender. Contrast volume use was clinically similar by access site, but 10-30 mL higher for men versus women (p<0.05 for CATH and PCI). Overall, VC+BC incidence was significantly higher from TF in women versus men (5.7% vs 3.7% p=0.01), but not from TR (1.5% vs 1.3%, p=0.77). Multivariable adjusted independent predictors of VC+BC are shown in the table.

Multivariate analysis of vascular or bleeding complications by access site						
	Odds Ratio (95% CI)					
	Femoral			Radial		
Variable	(n = 3022)			(n = 2976)		
Female gender	1.88	(1.31 -	2.71)	0.95	(0.50 -	1.79)
Age per 10 years				1.95	(1.47 -	2.59)
Congestive heart failure	1.96	(1.31 -	2.93)			
Diabetes mellitus	1.59	(1.08 -	2.32)	0.41	(0.18 -	0.93)
History of renal failure	2.43	(1.51 -	3.92)			
ST-elevation MI	4.07	(2.64 -	6.28)			
PCI procedure	1.77	(1.15 -	2.72)			
Procedures with missing data were excluded from modeling (Femoral n = 31;						
Radial n = 14)						

Conclusion: Transradial CATH and PCI normalizes the higher risk of VC+BC from TF seen in women compared to men. These observations strongly support the use of TR for CATH and PCI in women.